

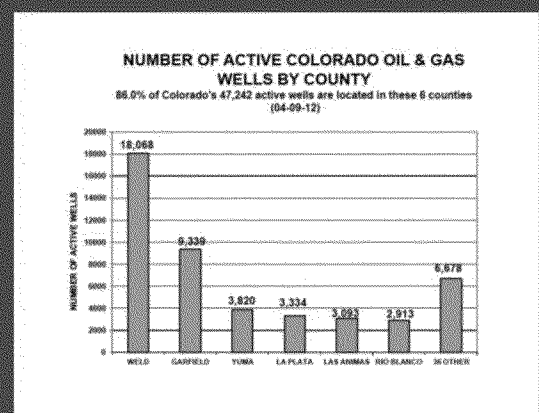
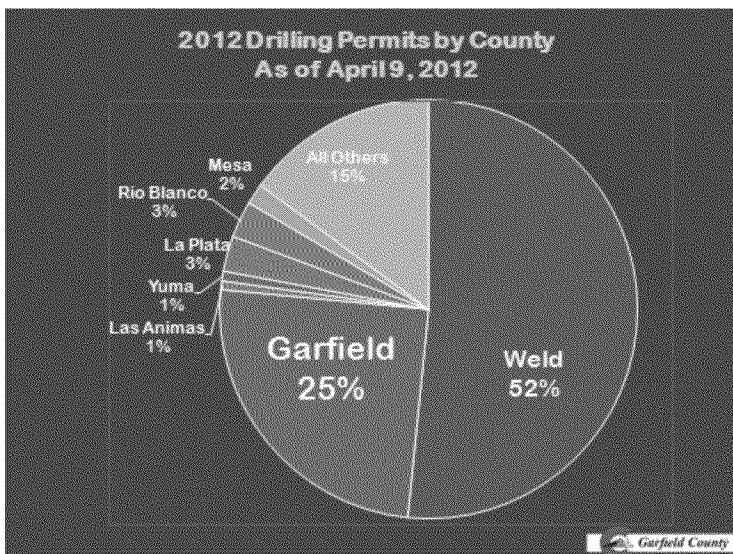
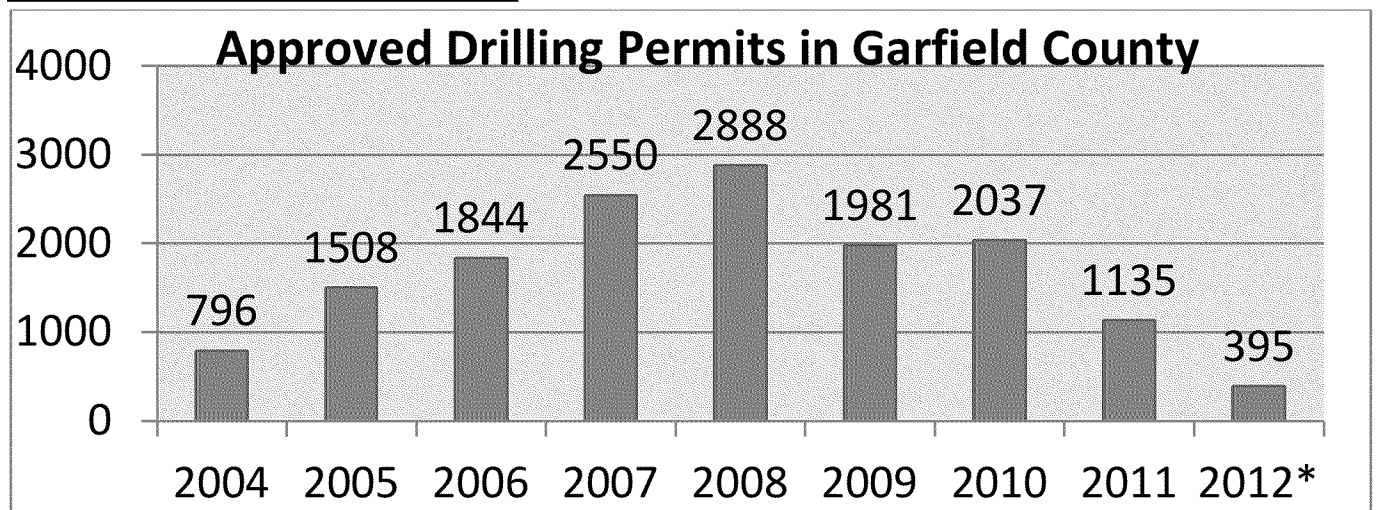


Oil & Gas

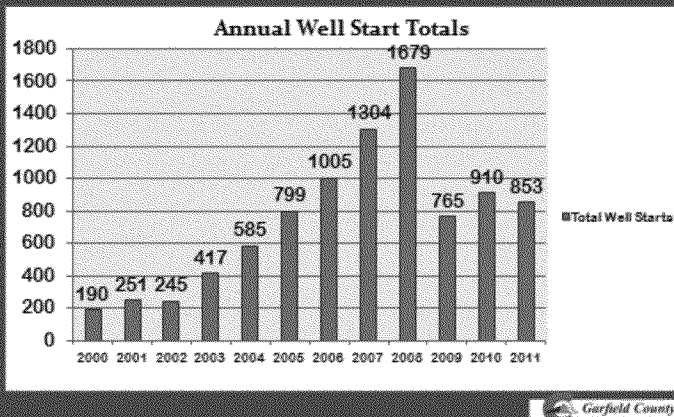
May 14, 2012

RE: Oil and Gas Liaison update

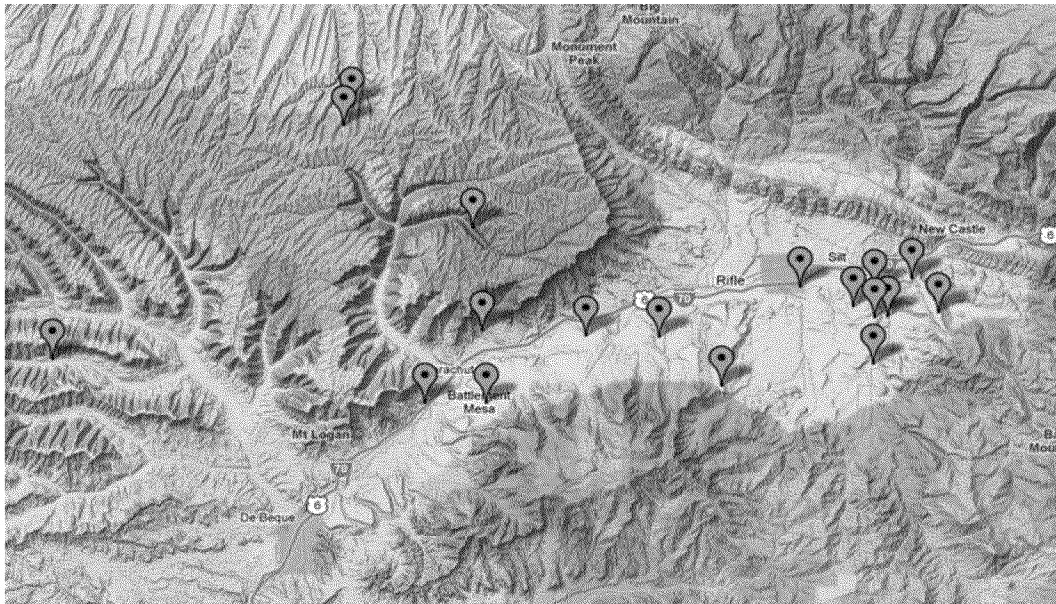
Garfield County Energy Industry Activity



Annual Well Starts, Garfield County



18 active drilling rigs in Garfield County, with expectation to drop at least one more during 2012. This is down from 20+ rigs operating in Garfield County during 2011. Natural gas prices have been at the lowest prices in recent history, hovering around \$2 per million British Thermal Units (\$2.31 May 2, 2012).



Energy Advisory Board

GarCo Oil and Gas Liaison provides a PowerPoint update each month which has seems to be appreciated versus a verbal update. Topics covered in include industry activity level, summary of industry questions and concerns our office received in the preceding month, status of various environmental monitoring and studies, and items of broad interest.

Time is allotted for public comment at each meeting. Generally there are one to three citizen comments each month. We keep track of and respond to comments, concerns, and questions until they are resolved. Most meetings feature an educational presentation from a topical expert on some aspect of oil and gas exploration, production, or regulation. During the April meeting, GarCo Oil and Gas liaison provided a detailed presentation of "A residents guide to the Hydraulic fracturing chemical disclosure rule".

While the EAB meetings have generally been effective and civil forum for discussion and resolution of citizen concerns in recent months, there is one lingering issue to report. *At the May 2012 EAB, the board ask ed me to forward the following guidance request to BOCC/County Attorney for a complex topic that comes to us each month since October for the same issue involving one landowner and one operator:* How should we handle topics brought to EAB by a citizen that is already in litigation with an operator? EAB recognizes its role to provide a n open forum for positive and proactive dialog and struggles with topics that come before them that simply cannot be addressed at that venue . In this case the operator is unable to speak freely given it is a legal proceedings underway and but is subjected to negative comment ary and personal accusations of dishonesty with no real opportunity to respond or provide 'their side' of the issue.

Other Public Meetings, Presentations and Outreach

Northwest Oil and Gas Forum : Provide Garfield County PowerPoint updates at each quarterly meeting

Community Counts: Denice Brown sits on the governing board. We consistently provide feedback and suggestions to help Community Counts succeed. On an average day we are educating at least a few residents about the service Community Counts provides and how that dovetails with the mission of the Oil and Gas Liaison office.

Citizen Advocacy and other groups: Participate at meetings on a semi -regular ba sis: Battlement Concerned Citizens, Battlement Mesa Oil and Gas Committee, Middle Colorado River Watershed Partnership, USGS Piceance Basin Water Quality partnership, Garfield County Air Monitoring Workgroup. Plan to broaden participation and exposure to other groups.

Presented "Economic and quality of life affects of oil and gas" to 80 members of the Steamboat Springs area realtors.

Special Studies

Hydrogeology Phase III study is still underway: In 2012 we have serviced the wells and measured water levels on two occasions. We will be collecting two more rounds of water quality samples in advance of final report preparation. With planned water sampling this summer and fall, the final report is currently expected to be completed at the end of 2012.

USGS Piceance Basin Water Quality Partnership: Participated in draft USGS report reviews. Leading the partnership steering committee effort to design and implement recommended ground water and surface water monitoring based on what we learned from the 1960 -2007 data compilation and synthesis represented in the draft reports.

Coordination among county departments

Internal Oil and Gas Committee meetings are ongoing and seem to be producing more effective communication and collaboration on Oil and Gas topics.

The Oil and Gas office initiates consultations with other departments on a regular basis. Other departments have been great to work with and very open to assisting our work and receiving assistance. We are fostering a team culture and mentality that will best serve county government and our citizens. Seems to be working well.

Coordination among other agencies

Participating in the formal comment process for the BLMs several Resource Management plan update processes.

Participated in the COGCC process to update reporting and public notice requirements after hydrogen sulfide gas is initially detected at Oil and Gas facilities. Suggested and provided the draft text that sets the requirement for effective public outreach and education prior to "Dangerous H₂S gas may be present" signage placement on and near private property or in areas where the public would reasonably encounter the sign. This should resolve a significant concerns/complaints received by our office.

Regular and proactive interactions with towns, other counties, CDPHE, COGCC, Towns, BLM, USFS, and other agencies related to oil and gas topics.

Coordination and communication with Energy Operators

Thus far communications and collaboration with our local energy operators have been working very well. Communications and joint efforts to understand and resolve issues that arise occur on a daily

basis. Generally operators have been very proactive about engaging our office as needed and providing advance notice of potential issues we may need to address.

Department of Local Affairs Residency Reports

This is a significant and time -intensive responsibility for our office . We verify oil and gas employee residency data. As needed we submit challenges to incorrect residency data through DOLA to ensure Garfield County receives appropriate credit and funding allocations from DOLA commensurate with the number of employees living in unincorporated Garfield County. Denise is reviewing employee residence records from about 380 employees and is on track to meet the June 4th DOLA deadline. During 2011 and 2012, we evaluated our data review process and have developed more efficient procedures. Looking ahead, we are currently working with the Assessor's office and other counties to develop additional automated process the streamline our effort for next year.

Resident Complaints and Concerns

We have made significant outreach efforts to let folks know the Oil and Gas liaison's office is available to help address questions and concerns that arise. This has been achieved via media placements, regular presentations/participation at public meetings with citizen groups, EAB, NW Oil and Gas Forum. That effort has yielded positive results as our general information inquiries have steadily picked up.

For each call about a n industry concern or complaint we try to maintain a very high standard in response timeliness and follow -up among citizens, industry representatives, and other agencies. Generally, industry has been responsive to exceptionally responsive when contacted to discuss and resolve issues.

September-November 2011, Summary by topic

- Odor = 2
- Noise = 1
- Erosion = 1
- Haul Route= 1

Miscellaneous information requests = 16

December-February 2012 Summary by topic

- * 5 Odor
- * 1 Noise
- * 1 Visual/Lights
- * 7 Haul Route
- * 3 Miscellaneous/other

Miscellaneous information requests 34

March-April 2012 Summary by topic

*	4	Odor
*	2	Noise
*	2	Haul Route

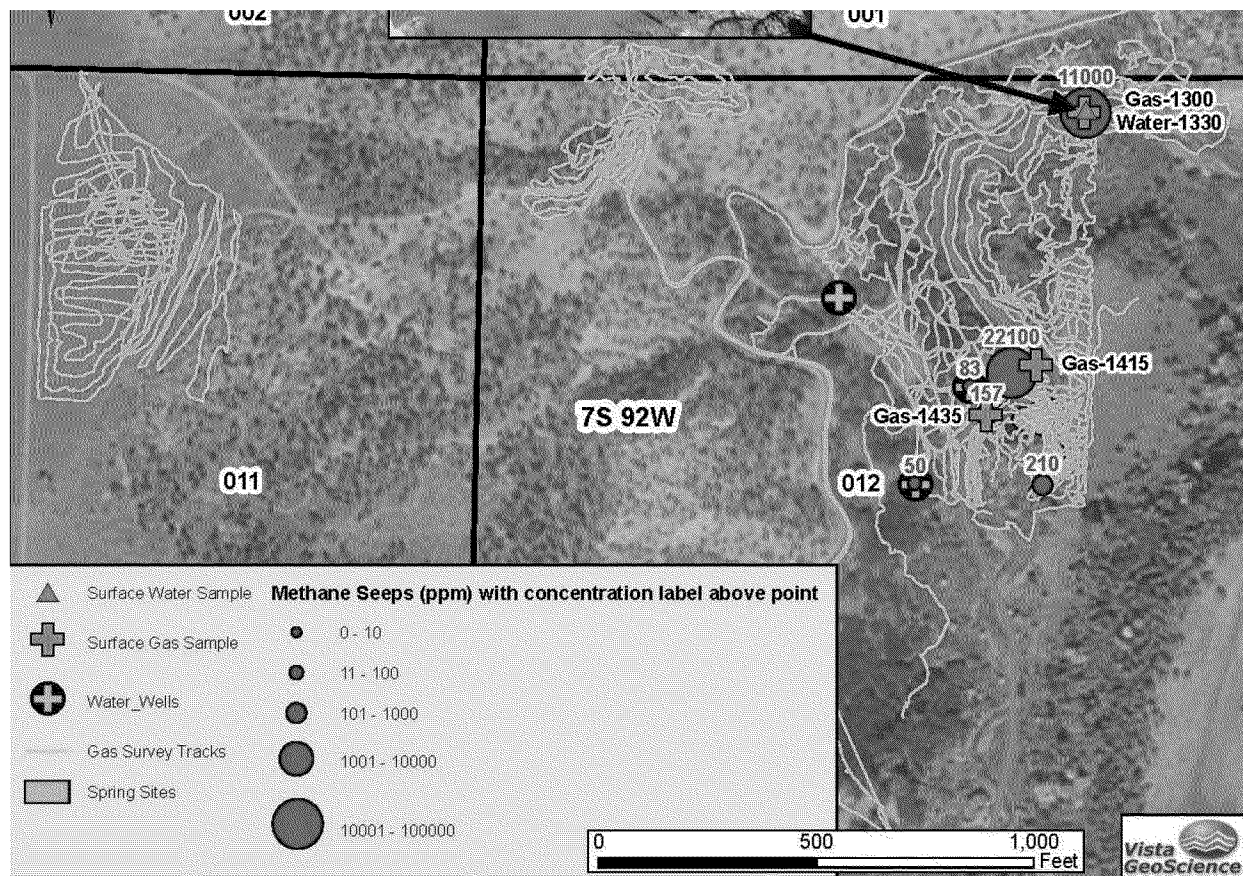
Miscellaneous information requests 22

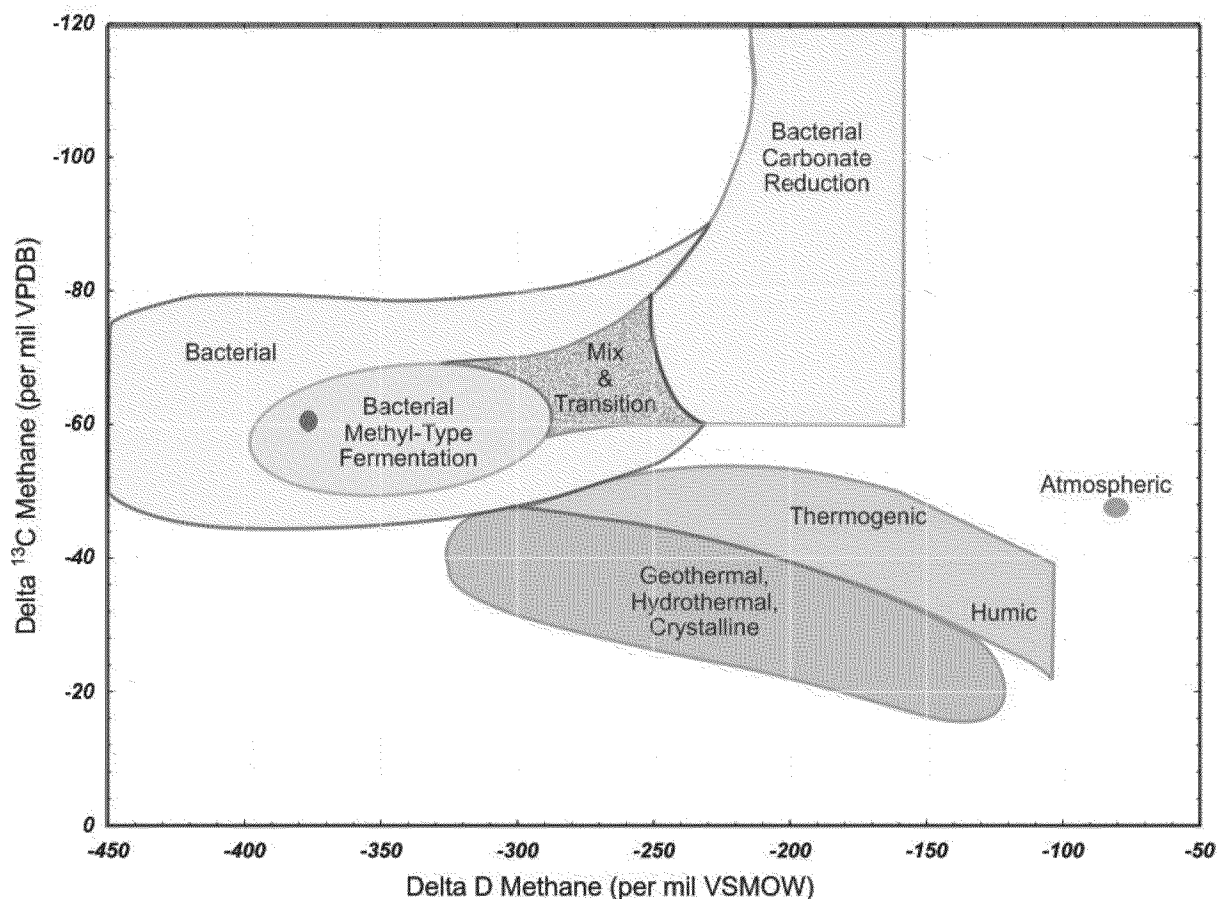
West Divide Creek

In response to a local landowner's concerns presented to BOCC in February, the BOCC asked the Oil and Gas liaison to work with the landowner to discuss any unresolved environmental issues and consider if additional action by the county is warranted. BOCC further asked that a summary be prepared regarding what has been done by the county, industry and others to understand and address associated with the 2004 and 2008 West Divide Seep. As a result we have gathered and assessed available data from industry and COGCC with the assistance of independent consultant Geoff Thyne. We have also met extensively with Encana, COGCC staff and the interested landowner, and conducted two site visits. Some of the highlights and conclusions of this ongoing evaluation are provided:

West Divide Creek Data: 2010 Soil Survey

Vista Geoscience 2010 Soil Gas survey results. The stable isotopic ratios for carbon and deuterium in methane show that the methane is of microbial origin characteristic of a fermentation (marsh gas) source. No evidence to indicate that thermogenic hydrocarbons have impacted the area surveyed (reported 2008 gas seep near West Divide Creek). Results show that the gas sample is principally composed of methane with trace amounts (parts per billion range) of methane homologs heavier than ethane. Free gas samples collected along the southern part of the creek contain trace amounts of presumably biogenic methane with no detectable C2+ hydrocarbons.





West Divide Creek Data: Quarterly surface and ground water monitoring results

The most recent data (September 2011) from the monitoring wells at West Divide Creek is plotted in Figures 1 and 2. The data show that the concentrations of benzene are approaching the regulatory limits. Methane concentrations remain relatively constant with seasonal oscillations (Figure 2). Hopefully, the more recent data yet to be posted on the COGCC website will show that benzene continues to decline. The decline of Benzene toward levels within regulatory limits matches the prediction provided by GarCo's independent consultant (Thyne).

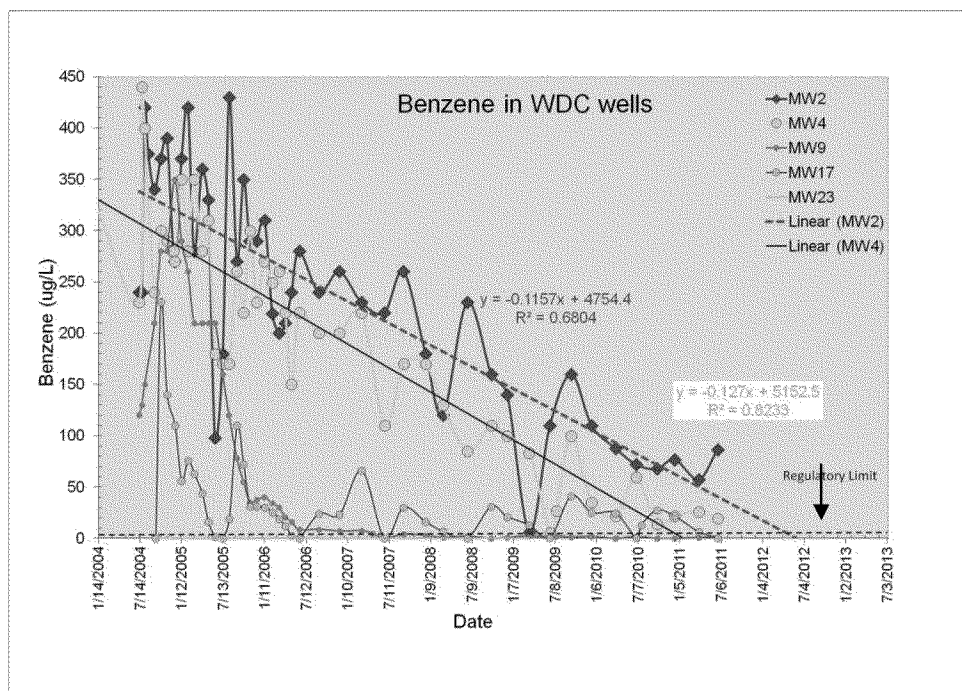


Figure 1. Concentration of Benzene with time for West Divide Creek Monitoring wells.

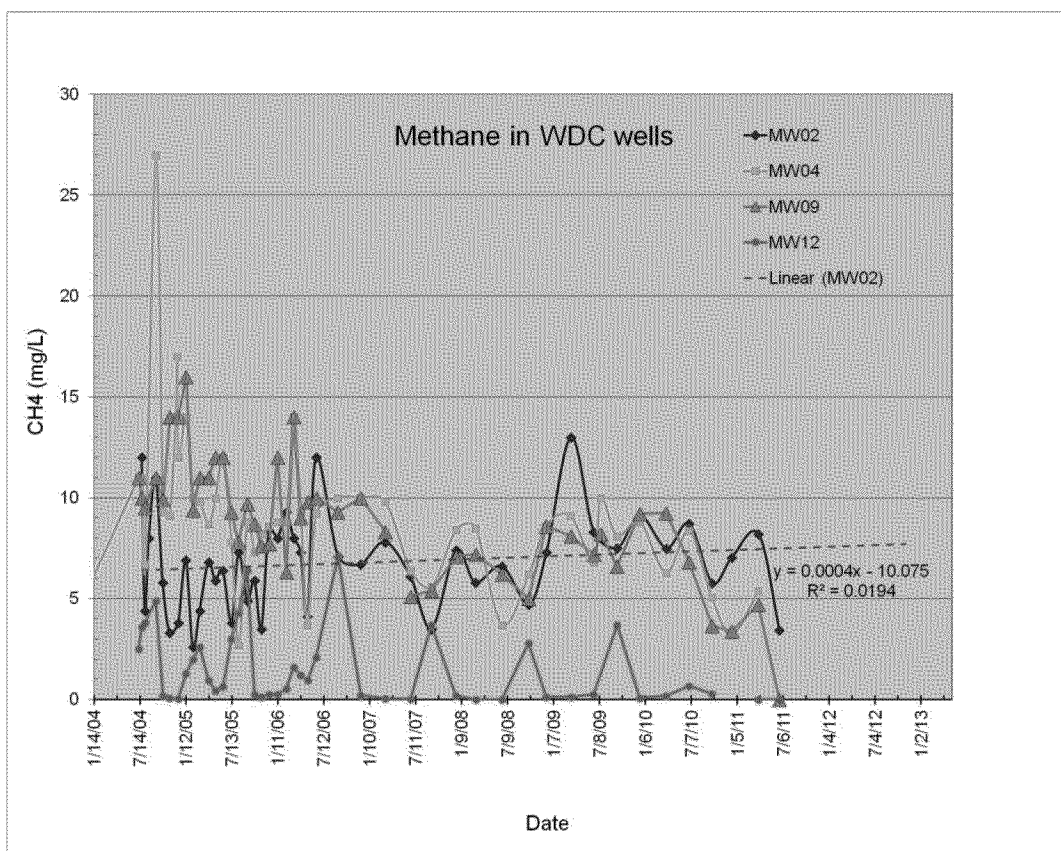


Figure 2. Concentration of Methane with time for West Divide Creek Monitoring wells.

West Divide Creek Data: Miscellaneous Data and results

There has been a resident report of a new/separate “2008 seep event” . This report comes with a request to implement additional monitoring at this very localized spot near West Divide Creek on the Bracken property. Part of the resident report includes reference to observations and sample results that ‘clearly indicate there has been a new/significant hydrocarbon seep event that created bubbling in the stream and standing water:

Detection of “Diesel” in COGCC soil samples. Three soil samples collected in the vicinity of the reported 2008 seep area contained Diesel range Organics (DRO) at low levels. These results have been mischaracterized as evidence of new hydrocarbon contamination. The results have a genetic signature indicative of naturally occurring compounds consistent with plant decay that precludes any source related to Diesel, gas, or other hydrocarbon fuel.

Frac sand was reported as having been observed in the area, potentially from an underground conduit. Sediment sample results from the suspect area indicated only natural sands/sediment in the area.

Methane gas samples collected in the area of the reported 2008 seep yielded only biogenic (naturally occurring) gas.

GarCo contracted an independent consultant (Geoff Thyne) to assist with data review to consider the impact of the reported 2008 seep and to provide guidance regarding the need for additional monitoring. Thyne reports the following: *In the 2009 report I acknowledged that there was additional activity north of the identified seep, but noted that the monitoring well data from the seep did not show any significant changes. The area Ms. Bracken identified as a new/distinct ‘2008 seep’ is about 1500 feet north along the creek from the known 2004 seep. The amount of activity she described was pretty minor, and didn't show up in the north-most existing monitoring wells (MW23 and 27). Much of the activity she noted was dead vegetation patches and biofilm sheens. Again pretty minor stuff and it could be entirely natural. Summary: there is some activity in 2008 that has not been reported again. The monitoring well data has not shown any significant change in composition or isotopic values. MW23 has very low methane, MW27 has never detected methane. If there was a significant new seep in 2008, there is no evidence in the wells. In summary, I think Ms. Bracken has spent a lot of time and effort in compiling all the information she can find. She is understandably invested. She also has defined impact very strictly. Any measurement that is not zero appears to cause concern. **The County has invested considerable resources in the West Divide Creek area. I think we have reached the point of diminishing returns in terms of expending County resources unless there is a big change. The reality is that the 2004 seep is relatively small, has been remediated as best they can manage, been sampled a lot and had several studies associated with the seep and surrounding area. Perhaps a new consultant starting from the beginning would find more, but I don't think anything that would change the basic conclusions that the 2004 seep is on a path toward being remediated.***